



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

Handwritten signature/initials

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,086	12/02/2003	Tsung Jang Shi	C2P3010-92-082E	1748

7590 09/21/2004

TSUNG JANG SHI  
235 Chung-Ho  
Box 8-24  
Taipei,  
TAIWAN

EXAMINER

NGUYEN, TU MINH

ART UNIT	PAPER NUMBER
----------	--------------

3748

DATE MAILED: 09/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/725,086

Applicant(s)

SHI, TSUNG JANG

Examiner

Tu M. Nguyen

Art Unit

3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to because Figure 1 should be labeled --Prior Art--.

Correction is required.

### *Specification*

2. The abstract of the disclosure is objected to because of the use of open ended phrase "comprise" on line 5. Correction is required. See MPEP § 608.01(b).
3. The disclosure is objected to because on page 4, line 18, "Form" should read --From--.

Appropriate correction is required.

### *Claim Objections*

4. Claims 2 and 7 are objected to because
  - Claim 2, line 3 of the claim, "second" should be deleted.
  - Claim 7, line 2 of the claim, "bodies" should read --body--.

Appropriate correction is required.

*Claim Rejections - 35 USC § 102*

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office Action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3, 5, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Kaufmann, Jr. (U.S. Patent 3,657,878).

Re claim 1, as shown in Figures 1 and 7, Kaufmann, Jr. discloses a auxiliary airflow booster of an engine installed to an exhausting tube (14) at an exhausting gate of the exhausting head (12) of a cylinder; the auxiliary airflow booster being a hollow body (120); an inner wall of the auxiliary airflow booster being formed with a narrowing portion (134) which comprises two opposite tapered surfaces so as to have a front via hole (148) and a rear via hole (138); the front via hole (148) has a front tapered portion (144) and the rear via hole (138) has a rear tapered portion (146); an inner diameter of the front via hole (148) being smaller than the inner diameter of the rear via hole (138) (as clearly shown in Figure 7); namely, the narrow portions of the front tapered portion and rear tapered portion are connected; since the inner diameter of the rear via hole (138) being larger than the inner diameter of the front via hole (149), the rear via hole expanding the diameter of the body; by above structure, the exhausting speed of waste gas is increased so that more fresh air is sucked into the cylinder.

Re claim 2, in the auxiliary airflow booster of Kaufmann, Jr., the length of the front tapered portion (144) of the front via hole (148) is shorter than that of the rear tapered portion (146) of the rear via hole (138).

Art Unit: 3748

Re claim 3, in the auxiliary airflow booster of Kaufmann, Jr., the material of the body is selected from one of metals and ceramics (which is inherent due to the high temperature of exhaust gas).

Re claim 5, in the auxiliary airflow booster of Kaufmann, Jr., a locking sheet or flange ((20) in Figure 1) is formed at a front end of the body for locking the exhausting head at the exhausting gate of the cylinder, and a rear end thereof is installed with a connecting section for engaging the exhausting tube (14).

Re claim 7, in the auxiliary airflow booster of Kaufmann, Jr., at least one body (120) is installed in the exhausting tube.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office Action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufmann, Jr., as applied to claim 1 above, in view of official notice.

The auxiliary airflow booster of Kaufmann, Jr. discloses the invention as cited above, however, fails to disclose that an auxiliary cover covers the periphery of the body.

Official notice is taken that providing an auxiliary cover for the periphery of the body of the auxiliary airflow booster in Kaufmann, Jr. is old and well known in the art. Such an arrangement has the clear and obvious benefit of providing a thermal insulation or an oxidizing protected layer for the airflow booster. According, it would have been obvious to one with ordinary skill in the art at the time of the invention to have incorporated the claimed limitation into the invention disclosed by Kaufmann, Jr. so as to provide thermal insulation and oxidizing protected layer for the airflow booster.

9. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufmann, Jr., as applied to claim 1 above, in view of Morita (Japan Publication 06-185340).

The auxiliary airflow booster of Kaufmann, Jr. discloses the invention as cited above, however, fails to disclose that an inner wall of the exhausting gate of the exhausting head of a cylinder is formed with a narrowing portion which comprises two opposite tapered surfaces so as to have a front via hole and a rear via hole; the front via hole has a front tapered portion and the rear via hole has a rear tapered portion.

As shown in Figure 2, Morita discloses an exhaust emission control device for an engine, comprising a venturi chamber (2) formed integrally with a cylinder head (1), the inner wall of the cylinder head of is formed with a narrowing portion which comprises two opposite tapered surfaces so as to have a front via hole and a rear via hole; the front via hole has a front tapered portion and the rear via hole has a rear tapered portion, as clearly shown in Figure 1. It would have been obvious to one having ordinary skill in the art at the time of the invention was made, to have formed the airflow booster of Kaufmann, Jr. integrally with a cylinder head as taught by Morita, since the application thereof would have reduced the size of the exhaust gas system.

Art Unit: 3748

***Prior Art***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and consists of seven patents: Bowes (U.S. Patent 1,794,276), Kaufmann, Jr. (U.S. Patent 3,657,878), van Ginhoven (U.S. Patent 4,023,365), Tsai (U.S. Patent 4,361,206), Gregorich et al. (U.S. Patent 4,690,245), Deville (U.S. Patent 5,174,113), and Sugawara (Japan Publication 06-017646) further disclose a state of the art.

***Communication***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Tu Nguyen whose telephone number is (703) 308-2833 or (571) 272-4862 to be effective on November 22, 2004.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Thomas E. Denion, can be reached on (703) 308-2623 or (571) 272-4859 to be effective on November 22, 2004. The fax phone number for this group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1148.

*Tu M. Nguyen*

TMN

September 18, 2004

Tu M. Nguyen

Patent Examiner

Art Unit 3748